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Journal of the Society of Arts.

FRIDAY, JUNE 7, 1861.

INTERNATIONAL EXHIBITION OF
1862.

The Council beg to announce that the Guar-

antee Deed is now lying at the Society's House for signature, and they will be much obliged if those gentlemen who have given in their names as Guarantors, will make it convenient to call there and attach their signatures to the Document. Signatures for sums amounting in the aggregate to £414,600, have been attached to the Deed.

GUARANTEE FUND FOR THE EXHIBITION OF 1862.

The following additions have been made since the last announcement, in the *Journal* for May 31 :—

* * * *The names marked with an asterisk are those of Members of the Society of Arts.*

NAMES.	AMOUNT.	REPRESENTING THE OBJECTS OF THE SOCIETY—ARTS, MA- NUFACTURES, AND COMMERCE.
Francis Edward Morrish, Lancaster-buildings, Liverpool	100	
The Duke of Devonshire, Devonshire House, Piccadilly, W.	2,000	
* Joseph Staples, 10, South-street, Brompton, S.W.	200	
Henry Miles, The Downfield, Kington, Herefordshire	500	
Frederick Chapple, Hayton Hall, near Prescott	500	
* Petter and Galpin, La Belle Sauvage-yard, E.C.	250	
Samuel Higgs, Mayor of Sudbury	100	

By ORDER,

P. LE NEVE FOSTER, *Secretary.*INTERNATIONAL EXHIBITION OF
1862.

The following letter has been addressed to Lord Granville by Prince Napoleon, President of the Imperial Commission appointed to represent the interests of intending Exhibitors :—

(COPY.)

Paris, le 1er Juin, 1861.

MILORD,—J'ai le plaisir de vous annoncer que S. M. l'Empereur, désirant concourir au succès de l'Exposition universelle de 1862, a bien voulu, par décrets des 14 et 18 Mai derniers, instituer, sous ma présidence, une Commission, chargée d'organiser la Section Française de cette Exposition, et de se concerter, à cet effet, avec la Commission Royale que vous présidez. Je m'empresse d'ajouter que mes collègues et moi nous sommes heureux d'entrer en relation avec la Commission Royale, et que nous lui apporterons dans cette œuvre d'utilité générale un concours dévoué.

Je profite, Milord, de cette première communication pour vous exprimer quelques vœux dont la réalisation hâterait l'accomplissement de notre tâche.

Le délai compris entre l'institution de la Commission dirigeante et l'ouverture de l'Exposition de 1862, étant moindre qu'il ne l'a été en 1851 et en 1855, il importe que la Commission Royale nous donne sans retard communication des actes, avis, et circulaires qui émaneront d'elle, et qui peut nous être utile de connaître.

Ainsi il nous serait particulièrement utile d'être éclairés sur le régime que la Commission Royale se propose d'adopter au sujet des récompenses, de savoir si ces récompenses auront un caractère international, ou si chaque nation y pourvoira selon ses propres convenances.

Nos travaux se trouvent tout d'abord entravés par l'incertitude où nous restons, jusqu'à présent, en ce qui concerne la situation, la forme, et l'étendue des emplacements qui seront attribués à nos nationaux pour l'exposition des produits de l'agriculture et de l'industrie, des machines en mouvement, et des œuvres d'art. Il serait particulièrement opportun que la Commission Royale nous adressât immédiatement le plan d'ensemble des locaux de l'Exposition universelle, avec mention spéciale des emplacements attribués à la France. Tant que ce document nous fera défaut, il nous sera impossible de prendre aucun engagement avec les personnes dont nous cherchons à stimuler le zèle, et, si cette incertitude se prolongerait, il serait à craindre que le succès de l'exposition ne fût définitivement compromis.

Je vous adresse ampliation des deux décrets qui constituent la Commission Impériale, et je me ferai un plaisir de vous donner ultérieurement, si la Commission Royale en exprime le désir, communications des faits qui pourront signaler le progrès de nos efforts.

Je dois enfin vous informer, Milord, que M. Rouher, Ministre de l'Agriculture, du Commerce, et des Travaux Publics, est nommé Vice-Président de la Commission Impériale, et que M. F. Le Play, Conseiller d'Etat, Secrétaire-Général de la Commission, est autorisé à correspondre, par délégation du Président, avec la Commission Royale.

Veuillez, &c.,

Le Président de la Commission,
(Signed) NAPOLEON (JEROME).A Son Excellence, Monsieur le Comte Granville,
Lord Président du Conseil.

TRANSLATION.

Paris, 1st June, 1861.

My Lord,—I have the pleasure of informing you that

His Majesty, the Emperor, being desirous of contributing to the success of the Universal Exhibition of 1862, has, by decrees of the 14th and 16th May, been pleased to appoint a Commission, of which I am President, to organize the French section thereof, and to place itself, for this purpose, in correspondence with the Royal Commission over which you preside. I am anxious to add, on the part of my colleagues and on my own, that we consider ourselves fortunate in being thus associated with the Royal Commissioners, and that we will render them hearty assistance in this work of general utility.

I avail myself, my Lord, of this first communication to express to you my desire to be supplied with information on certain points, the knowledge of which would materially assist us in the fulfilment of our task.

The time intervening between the appointment of the Superintending Commission and the opening of the Exhibition of 1862, being less than in 1851 and 1855, it is of importance that Her Majesty's Commissioners should communicate to us without delay all decisions, &c., proceeding from them, the knowledge of which can be of any use to us.

For instance, it would be especially useful to us to be informed of the regulations that Her Majesty's Commissioners propose to adopt in regard to prizes; whether these will bear an international character, or whether each nation will make its own arrangements in the granting of them.

Our labours are impeded at the outset by the uncertainty in which we are at present placed concerning the position, the nature, and the amount of space that will be allotted to our countrymen for the exhibition of agricultural and industrial produce, of machinery in motion, and works of art; and it would be extremely convenient if Her Majesty's Commissioners would take the earliest opportunity of transmitting us a general plan of the Exhibition buildings, showing the space allotted to France.

Until we are furnished with this document, it will be impossible for us to enter into any arrangement with those persons whose zeal we desire to stimulate; and if this uncertainty be prolonged, there is reason to fear that the success of the Exhibition may be sensibly affected.

I transmit you copies of two decrees appointing the Imperial Commission, and I shall have great pleasure in communicating to her Majesty's Commissioners, should they desire it, further information as to the progress of our labours.

I have, my Lord, in conclusion, to acquaint you that M. Rouher, Minister of Agriculture, Commerce, and Public Works, is appointed Vice-President of the Imperial Commission, and that by delegation of the President, M. F. Le Play, Councillor of State and Secretary-General of the Commission, is appointed to correspond with her Majesty's Commissioners.

I have, &c.

(Signed) NAPOLEON (JEROME).

CONVERSAZIONE.

The Second Conversazione of this Session took place at the South Kensington Museum, on Saturday evening last, the 1st inst.

The company were received by Sir Thomas Phillips, F.G.S., Chairman, and the Members of the Council.

The Bands of the Royal Horse Guards (Blue) and of the 1st Middlesex Engineer Volunteers, were in attendance.

The number of Members and their friends present was 3,550.

TENTH ANNUAL CONFERENCE.— NOTICE TO INSTITUTIONS.

The Tenth Annual Conference between the Representatives of the Institutions in Union and the Council will be held on Tuesday, the 18th inst., at half-past 10 o'clock in the morning. Sir Thomas Phillips, Chairman of the Council, will preside.

Secretaries of Institutions in Union are requested to forward, as soon as possible, to the Secretary of the Society of Arts, the names of the Representatives appointed to attend the Conference, stating at the same time (if possible) whether those gentlemen will also be present at the Society's Annual Dinner, which will take place on the following day, and of which particulars are given below.

The Chairmen of, or Representatives from, the several Local Boards of Examiners are invited to attend.

The Council will lay before the Conference :—

1. The Secretary's Report of the proceedings of the Union for the past year.
2. The Programme of the Examinations for 1862.
3. The Minutes of the Meeting which, at the suggestion of the Southern Counties Education Society was held here, to establish the "Central Committee of Educational Unions, in connexion with the Society of Arts." [See *Journals* of February 22nd and April 12th.]

* * The objects of that Committee are to promote a uniformity of standard in the Local Elementary Examinations, and to give a settled uniform value to the Local Certificates. The Council will be glad to ascertain, from the Representatives of Institutions and of the Local Boards, whether, in their opinion, those bodies are likely to be benefited by the action of the Central Committee.

4. In connexion with this subject, the Conference will be invited to consider whether it is desirable to pass any resolutions suggesting the further grouping of neighbouring Institutions in County or District Sub-Unions.

5. The Council will communicate to the Conference the Resolutions passed on the 6th of February, and published in the *Journal* of the 15th of that month, in favour of the establishment of District Museums, and the systematic circulation of interesting objects for temporary exhibition therein.

6. The Council will call attention to its recent communications with the Company of Painters' Stainers, [see *Journal* of 26th April], and will invite the Conference to consider whether any Resolutions should be passed in favour of Competitive Exhibitions of Works of Skilled Labour.

7. The Conference will be asked to consider whether arrangements should be made to enable Excursion Parties of Institutions in Union with the Society of Arts to assemble in a great gathering at the Crystal Palace, on Monday, the 26th, or Tuesday, the 27th of August, or on some other day.

8. The adjourned question, whether the Institutions can advantageously make arrangements for their members to visit the International Exhibition of 1862, will be brought forward.

9. At the last Conference it was agreed that the subject of Mr. Buckmaster's motion (of 1859), respecting the exclusion of Institutions from the Parliamentary Grants for Education, should be further discussed at the ensuing Conference.

10. The Representatives will be asked whether they

desire that the Society should print and issue to the Institutions another edition of the List of Lecturers.

Notice of any other subjects which Representatives may wish to submit to the Conference, should be given to the Secretary of the Society of Arts.

ANNUAL DINNER.

The One Hundred and Seventh Anniversary Dinner of the Society will take place at the Crystal Palace, Sydenham, on Wednesday, the 19th inst., at 5 o'clock, punctually. The Right Hon. the Earl of Elgin and Kincardine, K.T., G.C.B., will preside.

The Members and their friends will assemble in the ante-room of the Dining Hall, in the Railway-wing, at half-past four o'clock. Application for Tickets (price 10s. 6d. each) should be made to Mr. Samuel Thomas Davenport, at the Society's House. It is particularly requested that those who intend to be present will take their tickets as soon as possible in order to facilitate the arrangements.

EXAMINATIONS, 1861.

The following Prizes have been awarded to Institutions and Local Boards, in accordance with the conditions* set forth in the Examination Programme for this year:—

* The conditions were as follows:—

"The following Prizes are offered to the Institutions, viz.:—To the Institution whose Candidate obtains the above-mentioned First Prize of £5 in any of the 29 Subjects, one Prize of £5. An Institution can take more than one such Prize; but no such Prize can be taken by an Institution unless the Council of the Society of Arts is satisfied that the Candidate, in respect of whom the Prize is claimed, has received in a class at the Institution systematic instruction in the subject for a period of not less than three months.

"The following Prizes are offered to the Local Boards, viz.:—To the Local Board where the total number of Certificates awarded to the Candidates at the Final Examination (these Candidates being not fewer than twenty), bears the largest proportion (not less than three-fourths) to the total number of subjects in which they were examined;—One Prize of £10. To the Local Board where the total number of Certificates awarded to the Candidates at the Final Examination (these Candidates being not fewer than sixteen), bears the largest proportion (not less than three-fourths) to the total number of subjects in which they were examined;—One Prize of £8. To the Local Board where the total number of Certificates awarded to the Candidates at the Final Examination (these Candidates being not fewer than twelve), bears the largest proportion (not less than three-fourths) to the total number of subjects in which they were examined;—One Prize of £6. To the Local Board where the total number of Certificates awarded to the Candidates at the Final Examination (these Candidates being not fewer than eight), bears the largest proportion (not less than three-fourths) to the total number of subjects in which they were examined;—One Prize of £4. No Local Board can receive more than one of these Prizes. These sums may be applied by the Local Boards to the payment of the expense of the Examination, or otherwise, as the Board may deem best for the promotion of the objects for which it was instituted. No Prize of any kind can be awarded to, or in respect of, any certificated teacher, any pupil teacher, or any person belonging to a higher grade of Society than those referred to in Paragraph I. of the Preliminary Notice."

PRIZES TO INSTITUTIONS.

- One Prize of £5 to the Metropolitan Evening Classes, Sussex Hall, in respect of Candidate No. 444, Thomas Smith, who obtained the First Prize in Book-keeping.
- One Prize of £5 to the Leeds Young Men's Christian Association, in respect of Candidate No. 186, T. Myers, who obtained the First Prize in Algebra.
- One Prize of £5 to the Metropolitan Evening Classes, Sussex Hall, in respect of Candidate No. 450, William Vaughan, who obtained the First Prize in Geometry.
- One Prize of £5 to the Leeds Young Men's Christian Association, in respect of Candidate No. 193, Thomas Hick, who obtained the First Prize in Mensuration.
- One Prize of £5 to the Glasgow Mechanics' Institution, in respect of Candidate No. 354, John Crum, who obtained the First Prize in Magnetism, Electricity, and Heat.
- One Prize of £5 to the Glasgow Athenæum, in respect of Candidate No. 567, John Allan, who obtained the First Prize in Logic and Mental Science.
- One Prize of £5 to the Glasgow Institution, in respect of Candidate No. 828, William Craig, who obtained the First Prize in Latin and Roman History.
- One Prize of £5 to the London Mechanics' Institution, in respect of Candidate No. 36, George Legg, who obtained the First Prize in French.
- One Prize of £5 to the Metropolitan Evening Classes, Sussex Hall, in respect of Candidate No. 452, George Warrington, who obtained the First Prize in German.
- One Prize of £5 to the Glasgow Mechanics' Institution, in respect of Candidate No. 328, James Wade, who obtained the First Prize in Music.

No Prizes are awarded to Institutions in respect of the Candidates who obtained First Prizes in Arithmetic, Trigonometry, Conic Sections, Navigation and Nautical Astronomy, Chemistry, Animal Physiology, Botany, Mining and Metallurgy, Geography, English History, and English Literature, it having been ascertained that these Candidates had not received "systematic instruction" in these subjects at their respective Institutions "for a period of not less than three months," as required by the conditions.

PRIZES TO LOCAL BOARDS.

- The Prize of £10 to the Local Board at the Glasgow Institution.
- The Prize of £8 to the Local Board at the Glasgow Athenæum.
- The Prize of £6 to the Local Board at the London Mechanics' Institution.
- The Prize of £4 to the Local Board at the Halifax Mechanics' Institution.
- The Second Prize of £3, in Geography, has been awarded to No. 386, John Grieveeson, aged 28, Darlington Church of England Institution—Railway Agent.

FEMALE SCHOOL OF ART.

An Exhibition of Water Colour Paintings, illustrative of the history of the art, is now open at the House of the Society of Arts. This Exhibition has been organised for the purpose of aiding the building fund of the Female School of Art. This school has met with unforeseen difficulties. It was established and for a time supported by governmental aid, and then that aid was suddenly withdrawn. The school, originally the female "School of Design," was established by Government at Somerset House, in 1842, but from want of accommodation it was removed to adjacent premises in the Strand, and for a

similar reason transferred to Gower-street in 1852. In the report it is stated that "since 1852 six hundred and ninety students have entered themselves at the school, and the number at the present time is 118, of whom 77 are studying with the view of ultimately maintaining themselves. Some of them daughters of clergymen and medical men, unexpectedly compelled by a variety of causes to gain their own livelihood, and even to support others besides themselves, have, through the instruction and assistance received here, obtained good appointments in schools, or are enabled to live independently by means of private teaching. The present daily attendance averages seventy." Precisely at the time when the school seems to have struck root and to be steadily widening its area of usefulness, the Committee of Council on Education have intimated their intention of withdrawing their special assistance from the school (amounting to £500 per annum.), and of finally closing it, unless it can be placed on a self-supporting basis. Now, the success of the school proves that it is of sufficient value to deserve an effort to maintain its existence. The works of the female students here exhibited with the historical collection, and for which medals and prizes were distributed by the President of the Committee of Council on Education, Earl Granville, in the lecture theatre of the Museum of Geology, Jermyn-street, on Saturday, are in many ways encouraging. It appeared advisable, therefore to make an effort to purchase premises as a home for the school, and thus give it a fair chance of becoming self-supporting. For this purpose it was calculated that at least £2,000 would be required. An appeal to the public has already brought in subscriptions to the amount of £1,191; the present exhibition will increase this amount, and a bazaar will be held in June for the same object. It is further understood that the Science and Art Department is prepared to apply to Parliament for a grant of 25 per cent. on the cost of erecting the building. There is, therefore, the fairest prospect that a female school of art will be added to the few resources open to respectable but unsupported women of obtaining an honourable livelihood; and such a plan deserves every success.

Visitors are admitted to this exhibition on payment of one shilling.

TWENTY-FOURTH ORDINARY MEETING.

WEDNESDAY, JUNE 5, 1861.

The Twenty-fourth Ordinary Meeting of the One Hundred and Seventh Session was held on Wednesday, the 5th inst., His Royal Highness the Prince Consort, President of the Society, in the chair.

The following gentlemen were proposed for election as members of the Society:—

Addington, Right Hon. Henry Unwin.....	78, Eaton-place, S.W.
Andrew, Charles William.....	6, Spencer-place, Brixton-road S.
Andrews, Samuel	21, John-street, Adelphi, W.C.
Angell, Joseph	10, Strand, W.C.
Asprey, Charles	166, New Bond-street, W., and 22, Albemarle-street, W.
Baume, Celestin.....	21, Hatton-garden, E.C.; and 15, Canterbury-road, East Brixton, S.
Berri, David Gardner...	96, Great Russell-street, Bloomsbury, W.C.
Beveridge, Erskine.....	Priority House, Dunfermline, N.B.
Biddle, Daniel	81, Oxford-street, W.
Black, J. R., M.D. ...	23, Sumner-place, Onslow-square, S.W.
Blackwell, Thomas F.	21, Soho-square, W.
Browning, John	111, Minorities, E.
Byas, Edward.....	20, Princes-square, Bayswater, W.
Cock, John, jun.	Southmolton, Devon.
Coghlan, H.	14, Hyde-park-gardens, W.
Cole, Thomas	6, Castle-street, Holborn, E.C.
Collins, William Job, M.D.	1, Albert-terrace, Primrose-hill, N.W.
Cooke, William	26, Spring-gardens, S.W.
Christy, Henry	103, Victoria-street, Westminster, S.W.
Davis, Frederick.....	100, New Bond-street, W.
Evans, John Llewellyn	120, Westbourne-terrace, W.
Fairbairn, Andrew	Wellington Foundry, Leeds.
Fisher, Samuel	33, Southampton-street, Strand, W.C.
Foot, Harry Wells ...	75, Old Broad-street, E.C.
Galpin, Thomas Dixon	Datchet Lodge, Datchet.
Gibbs, John	122, High-street, Oxford.
Gooden, James Chisholm	33, Tavistock-square, W.C.
Goore, Wm. Henry P.	Camden-villa, Moscow-road, Kensington Palace-gardens, W.
Graham, Charles.....	18, Cannon-street, E.C.
Great-Rex, Augustus ...	23, Holborn-hill, E.C.
Hannay, Thomas	7, Terrace, Liskeard, Cornwall.
Hawkins, George	88, Bishopsgate-street Without, E.C.
Hemming, Frederick H.	104, Gloucester-place, Portman-square, W.
Henderson, George Wm. Mercer	103, Eaton-place, S.W.
Hewett, William	18, Fenchurch-street, E.C.
Hopcraft, George	3, Billiter-square, E.C.
Johnson, F.....	12, North-street, Westminster, S.W.
Knill, Stuart	The Crosslets-in-the-grove, Blackheath, S.E.
Ledger, Robt. Goulding	St. John's, Southwark, S.E.
Leigh, Evan	Newton-grange, Newton Heath, near Manchester.
Leigh, Frederick Allen.	Eccles, near Manchester.
Leonard, Thomas	Tabernacle-walk, Finsbury, E.C.
Leuchars, William.....	38, Piccadilly, W.
Lewis, James	Bartlett's-buildings, Holborn, E.C.
Lezard, Joseph	21, Hatton-garden, E.C.; and 41, Duncan-terrace, Islington, N.
Line, William.....	Daventry.
Lucas, Thomas Charles.	Lower Grove House, Roehampton, S.W.
Malcolm, Major-General G. A.....	67, Sloane-street, S.W.

Martyn, Silas Edward..	{ 46, Thurloe-square, Brompton, S.W.
Maynard, Joseph	{ 52, Westbourne-terrace, W.
Miles, Alfred W.	{ 11, St. Mary Abbot's-terrace, Kensington, W.
Monk, Frederick W....	{ Woodland-villas, Gipsy-hill, Upper Norwood, S.
Needham, William ...	{ Kilmorey House, St. Margaret's, Twickenham, S.W.
Newen, George	{ 1, Hyde-park-terrace, Kensington-gore, W.
Noland, Edward Henry	{ 29, Abingdon-villas, Kensington, W.
Pearce, John	{ 2, Cockspur-street, Charing-cross, S.W.
Potter, George William	{ 7, Upper Hornsey-rise, N.
Phillips, George.....	{ 358 and 359, Oxford-street, W.
Reed, Charles.....	{ Paternoster-row, E.C.
Rintoul, Robert	{ Wyndham Club, St. James's-square, S.W.
Saul, G. T.....	{ Bow Lodge, Bow, E.
Shove, W. Spencer ...	{ Lee-terrace, Lee, S.E.
Staples, Joseph	{ 10, South-street, Brompton, S.W.
Staples, Joseph Henry	{ 25, Upper Seymour-street West, Connaught-square, W.
Prosser.....	{ 2, Coleman-street, E.C.
Story, George Marvin..	{ 4, Gower-street, Bedford-square, W.C.
Taylor, George	{ Weirs and Hincksey Mills, near Oxford.
Towle, John	{ 27, Francis-street, Tottenham Court-road, W.C.
Walker, Joseph W. ...	{ 223, Oxford-street, W.
Williams, Charles	{ 25, Orchard-street, Portman-square, W.
Woodall, Frederick ...	{

The following candidates were balloted for and duly elected members of the Society :—

Adams, George William	{ Montague-house, Addison-road, Kensington, W.
Balleras, Guillermo Esteban	{ Seville-villa, Carlton-hill, St. John's-wood, N.W.
Brown, J. W.....	{ 7, Upper Hyde-park-gardens, W.
Christy, Samuel	{ 21, St. James's-place, S.W.
Clements, W.....	{ Cream-hall, Highbury-vale, N.
Cropsey, J. F.	{ 2, Kensington-gate, Hyde-park South, W.
Crossman, Robert	{ 29, Westbourne-terrace, W.
Edwards, William ..	{ Denmark hill, S.
Follett, Robert B.	{ 25, Norfolk-crescent, W.
Forrest, John	{ 6, Highbury-crescent West, N.
Gregory, Thomas	{ 212, Regent-street, W.
Hannay, Robert, jun....	{ Springfield, Ulverston.
Hare, Sir John, F.G.S.	{ Clifton, Bristol; and Chateau d'Hardelet, près Samer, Boulogne.
Hurlstone, F. Y.....	{ 9, Chester-street, Belgrave-square, S.W.
Jodrell, the Rev. Sir Edward Repps, Bart., M.A.	{ 64, Portland-place, W.; Sale-park; and Saxlingham Rectory, Norfolk.
Mocatta, Benjamin.....	{ 29, Gloucester-square, Hyde-park, W.
Oxenham, Hugh	{ 353 & 354, Oxford-street, W.
Ryder, William Henry	{ 17, New Bond-street, W.
Simpson, T. A.	{ 154, Regent-street, and 8, Beak-street, W.
Stagg, George	{ 2, Craven-hill-gardens, W.
Stocken, Frederic	{ 5, Halkin-street, Grosvenor-place, S.W.

The Paper read was—

ON THE INTERNATIONAL EXHIBITION OF 1862.

By MR. WILLIAM HAWES.

The Council, appreciating the support it has received from the members of the Society in every step it has taken to promote the Exhibition of 1862, resolved to devote the last weekly meeting of the season to the consideration of what has already been done and is doing to ensure the success of this great national undertaking.

But whilst the Council is happy to have an opportunity of laying before the members, the plans of the Royal Commissioners so far as they are known, it must not be considered in the slightest degree responsible for the views and opinions I may express in the paper I have the honour to read.

In order that we may fully appreciate the prospects of the Exhibition of 1862, I will first briefly direct your attention to the origin and progress of the Exhibition of 1851, and then consider whether the advantages derived from it, and the present state of the Arts, Manufactures, and Commerce, as compared with that time, justify the exertions which must be made to form another Exhibition of equal interest and importance.

The idea of holding a National Exhibition, as most of my hearers are aware, originated here. It sprung almost naturally from the proceedings of the Society, for so far back as 1756 it offered prizes for improvements in the manufacture of tapestry, carpets, porcelain, &c.

In 1761, a gentleman was paid to attend an exhibition of machinery in the Society's Rooms, and explain the models exhibited. From an early period, it offered prizes for improvements in agricultural and other machinery.

An Exhibition "of specimens of new, and improved productions of the artisans and manufacturers of the United Kingdom," the first of its kind, was held in the King's Mews, at Charing-cross, in 1828. In 1829, the then Secretary of the Society read papers on several of the leading industries of the kingdom, and from this time specimens of raw materials, manufactures, and new inventions were frequently collected in these rooms for the instruction, and amusement of members and the public.

Then followed local Trade Exhibitions, held at Manchester, Birmingham, Leeds, Dublin, and other places; the Exhibition of manufactures at the Free-Trade Bazaar, held in Covent-garden Theatre, in 1845; the Exhibitions of Select Specimens of British Manufactures and Decorative Arts, held by the Society in 1847, 1848, 1849, the Mulready and Etty Exhibitions in the two latter years; and the Exhibition of Inventions held annually, from that time, in this Society's Rooms, each year proving, by the increased ap-

plications for space, that the resources of the Society of Arts were less and less sufficient to meet the growing interest of the public in such collections.

In France, Exhibitions of national industry had been held at irregular periods between 1789 and 1849, each Exhibition surpassing its predecessor in the number of exhibitors and in the value and importance of the manufactures and machinery exhibited; but the unusual success of that held in 1849, just as this country was sanctioning principles of the most perfect freedom of commercial competition, gave a fresh impetus to the idea of holding a great national Exhibition of British industry, for it was felt to be clearly unwise of our manufacturers to allow their French rivals to attract consumers from all parts of the world, to see and to admire their most beautiful productions, and that no opportunity should be afforded them to become acquainted with the manufactures of England.

The proposition made by this Society to hold an Exhibition of English industry, was, when brought under the notice of our Royal President, soon enlarged into an International Exhibition of the world's industry. Without a clear perception of the progress his adopted country was making, and of the importance of showing it to the world, this comprehensive plan would never have been matured; and the weight of such high authority was necessary to secure an impartial and full consideration of the benefits likely to be derived from the accomplishment of this bold and novel attempt to stimulate our industry by comparing it with that of every other nation.

But, before the plan was fully adopted by the country, at a dinner given at the Mansion House, in October, 1849, by the then Lord Mayor, for the express purpose of promoting an International Exhibition, His Royal Highness, in a speech as remarkable for the simplicity of its language as for the largeness of the views it embodied, placed the subject so ably and so concisely before the world, that no doubt was then entertained that to England would belong the honour of holding the first Exhibition for the purpose of collecting and exhibiting in one building the Works of Industry of all Nations, and which, in the words of His Royal Highness, was—"to give a true test and a living picture of the point of development at which the whole of mankind had arrived in this great task, and a new starting point from which all nations will be able to direct their further exertions."

That the Exhibition fully realised the most sanguine anticipations in showing the state of development of the Manufactures of all nations up to 1851, and that it gave to the world a more thorough knowledge of the power, and better appreciation of the capabilities, of each nation, is universally admitted, and it now remains for the

Exhibition of 1862 to show what has been the world's progress from the starting point so clearly indicated in 1851, not only in the production of works of Art, or in the increased beauty of certain manufactures, but in the practical applications of science, invention, and mechanical skill to improve and to cheapen the necessities of every-day life, and so to raise the social position, by adding to the comforts and enjoyments, of the great bulk of the people.

In January, 1850, the Royal Commission for holding an International Exhibition was issued, and from that time nothing that could contribute to its success was neglected. To overcome and to dispel the prejudices opposed to it, was a work of no common order, and without a reference to the daily press of the time, it would be difficult to recall to our memory their intensity. The exposure of the finest specimens of our machinery and manufactures to foreigners, for them to imitate, was loudly condemned. The injury sure to follow to our home trade, from the exhibition to our own countrymen of the finest productions of foreign countries, was pressed upon manufacturers. The large number of foreigners expected to come and see the Exhibition was a source of alarm and distrust. Indeed every argument which ignorance, fear, and jealousy could suggest, was freely used to stop the progress of this great and novel movement in the public mind. But the common sense of the country triumphed over such obstacles, and the zeal, energy, and enthusiasm displayed by the few—all members of this Society—who devoted themselves to the task, were soon deservedly rewarded by complete success.

Let us now contrast the state of public feeling towards such Exhibitions in 1851 and 1862.

Then it was necessary, in order to obtain subscriptions, to hold meetings in this City and in the manufacturing towns, to explain the object and probable result of an International Exhibition, but although the success at these meetings was great, and between £60,000 and £70,000 was collected, they occupied so much time, that it was soon evident some other means must be adopted to raise money, or the great idea of an International Exhibition must be given up.

To prevent so unfortunate a result, it was suggested, almost at the last moment, to raise money on a guarantee for a very much larger sum than was at all likely to be required, and a few individuals boldly determined to incur the responsibility of the entire sum suggested, viz., £250,000—His Royal Highness subscribing for £10,000.

Upon this instrument, the Bank of England agreed to advance, beyond the sum already subscribed, whatever might be wanted to complete the works, and from this moment all pecuniary difficulty was removed.

Now, ten years later, aware of the advantages

derived from the Exhibition of 1851, and having ample grounds on which to estimate the benefits likely to result from another, the public, as soon as this Society published a well-considered plan, came forward rapidly and liberally to sign a guarantee deed, upon which the Bank of England has agreed to make an advance sufficient to carry out the second great International Exhibition.

This deed is signed, to the amount of £414,600, by nearly 1,000 persons connected with or interested in Arts, Manufactures, and Commerce:—above 400 of whom, representing £220,000, are members of this Society; and, what is most remarkable, this great result has been accomplished without the excitement of a single public meeting, or any other appeal to the public than through the ordinary channels of this Society.

No one then can for a moment doubt that this list of guarantors very perfectly represents the public conviction that great good resulted from the Exhibition of 1851, and that the proper time has again arrived for challenging the world to exhibit its finest works in Art, its best and cheapest Manufactures, and to test the industrial progress each nation has made since that time. Let us then consider whether we may fairly hope to realise the expectation that the Exhibition of 1862 will be in every respect worthy of its time, and show such an advance in Art and in Manufactures—in Machinery and its appliances, as to justify the promoters in fixing ten years as a proper period for the recurrence of such undertakings. If this be satisfactorily proved, then we may safely predict that periodical International Exhibitions will become one of the fixed institutions of the country, and will be looked for by producers and consumers as the centre towards which novelty, improvement, beauty of construction and design, will be directed.

First, then, let us refer to our national progress since 1851.

The population of Great Britain has largely increased. In 1851 it was 25,180,555, and in 1862 it will probably be 29,000,000. In London there will be next year half a million more inhabitants than in 1851.

The people are better employed, and their social and intellectual condition is improved.

Crime, which for years previously to 1851 increased in a ratio beyond that of the population, is now happily decreasing.

In 1850, in England and Wales, 20,423 persons were committed for trial, and 76,494 were summarily convicted, the population being then 15,911,725.

In 1859, only 16,904 were committed for trial, and 74,769 convicted summarily, the population being in round numbers 18,000,000.

Railways have been extended from above 6,000, to above 10,000 miles.

The electric telegraph has become universal, and in every direction facilities for communication have been increased. We have repealed the duties on soap and paper, the only manufactures the prosperity of which was then thwarted by Excise restrictions.

We have abolished all taxes on the dissemination of knowledge, and have given increased facilities for the circulation of knowledge by post.

We have repealed the Import duties, or very nearly so, on raw materials, the produce of foreign countries.

We have admitted, free of duty, confident in our strength, the manufactures of foreign countries to compete with our own.

Old industries have been stimulated and improved. New industries have arisen.

In fine art, painting, and sculpture it is hardly possible, except in very extraordinary periods, that a marked change can be observed in a single ten years, but this country certainly holds its own as compared with the productions of other countries.

But a public measure, of great importance to the future development of the fine arts, should not be overlooked, I mean the Artistic Copyright Bill, introduced to the House of Commons by the Attorney-General, the Bill having been prepared by the Artistic Copyright Committee of this Society.

The object of this Bill is to give to artists that protection to their property which is now enjoyed by literature, and to give to foreign artists, sending their works to our exhibitions, the same protection they afford to English artists sending pictures or works of art abroad.

Photography, hardly known in 1851, has developed itself, and has become an important branch of art and industry, used alike by the artist, the engineer, the architect, the manufacturer, the merchant, and the magistrate. By its fleeting effects of nature are caught, and preserved for the use of the artist; old records, old works of art, decaying by the action of time, are copied and perpetuated. Those precious drawings—relics of great artists of old time—which were necessarily confined to collections in which they were carefully guarded, are rendered accessible to all; and we have multiplied, in marvellous reality, the sketches and studies by which master hands recorded the thoughts of master minds; the progress of works is daily recorded, for the information of the engineer; the finest tracery of ancient architecture preserved, in its exact proportions, for the architect; the manufacturer and merchant can transmit to, and receive from their most distant correspondents, exact representations of what they require to be imitated or produced; the soldier, sailor, and civilian on foreign service finds in photographic likenesses, and the facility with which they are

renewed, the means of retaining the fondest associations of home and country; and the criminal flying from justice is followed with means of instant identification. This is indeed an international application of art-industry.

In the preparation of colours for printing and dyeing, most important discoveries have been made by our chemists, to whose researches the manufacturing industry of the country is greatly indebted. The recently-discovered and most beautiful and brilliant colours, called the "Aniline" series, are produced from coal and its products, and the facility of their application is so great that a complete revolution is taking place in the processes of dyeing and printing.

In the manufacture of glass great economy has been introduced, and the process, just perfected, of transferring photographs to glass, and permanently fixing them by the action of fire, will add a new and beautiful style of ornamentation to our houses.

The manufacture of agricultural implements, and especially the application of steam power to them, has been so improved and extended that it is now a highly-important branch of trade; and the exhibition of the improvements which have been made in our spinning, weaving, and winding machinery will afford interesting evidence of our mechanical progress in these branches of industry.

Marine telegraphy, only just accomplished in 1851—the public communication with Dublin having been opened in June, and that with Paris in November, 1852—has now become almost universal, linking together distant countries, and destined ere long to overcome the difficulties of separation by the ocean, be the distance ever so great.

In the manufacture of iron, improvements have also been made—new bands of ore have been discovered; and day by day we are economising its production, and a metal between iron and steel is now produced, at one process, which heretofore required two or more processes, alike expensive and difficult.

In artificial light our sphere of production is enlarged, and light is cheaper whereby hours are now available for industrial pursuits, and for the acquisition of knowledge by large numbers, which were formerly either unemployed or wasted.

In steam power, especially that applied to railroads and to ocean steam navigation, economical appliances have advanced rapidly.

The use of coal for locomotives, in place of coke, and super-heating steam and surface-condensing in ocean steamers, tend to increase the power and economise the cost of these powerful engines of civilisation.

In shipbuilding, the past ten years have produced great changes.

Our navy and mercantile marine have alike

advanced in scientific construction and in mechanical arrangements. The ocean steamers which were then employed in the postal service included but one of 2,000 tons—now there are many of nearly double that tonnage, with corresponding power and speed—increasing the facilities and decreasing the risk of communication with our colonies and foreign countries.

In the *Great Eastern* we see the practical application, for the first time, of screw and paddle to the same ship; we have enormous strength in her cellular construction; and we have greater speed, with power smaller in proportion to her size, than was ever before attained.

Constructed as she was to exhibit to the world one of the greatest triumphs of Saxon energy, and to be the instrument for the distribution of the results of our industry and intelligence in the shortest time and in the safest manner to our most distant and most valuable dependencies, it is lamentable to think that two years have nearly passed, and so much money been frittered away, with scarcely an approach being made to the accomplishment of the great national object for which she was built.

In the construction of our *Warrior* and *Black Prince* and other iron-plated ships, we have a combination of wood and iron by which our ships of war may almost bid defiance to whatever may be brought against them, being, both in size and power, far beyond anything which was contemplated in 1851; and machinery is now being constructed, having its origin in the block machinery at Portsmouth, by which the woodwork required for large boats will be so accurately prepared, that they will be put together in a few hours.

In printing great advances have been made. By the perfection of chromatic printing, views of distant countries, copies of celebrated pictures, most beautifully coloured, have been brought within the reach of almost every class, displacing pictures which neither improved the taste nor gave useful information; and by the application of most expensive and most beautiful machinery, to the printing of our daily journals, we have been enabled profitably to meet the increased demand caused by the cheapness of our newspapers. Invention and mechanical contrivance have thus kept pace with the requirements of intellect and the daily increasing love of knowledge; and, to crown all, the gold discoveries in Australia, but just known in 1851, and following those in California, in 1849, have supplied a medium of exchange when it appeared almost indispensable to the full realisation of the advantages springing out of the great impetus given to industry during the past ten years.

But there are two branches of industry not to be overlooked, which did not exist in 1851. The manufacture of arms of precision, and the

voluntary organisation of skilled labour to use them, both of which may at first sight appear antagonistic to the progress of Art, Manufactures, and Commerce, but are, in fact, their great protectors. War, a remnant of barbarism, must fortunately be infinitely more difficult, hazardous, and expensive, not only in the preparations for it, but in its results, when arms are constructed of such power that hardly any fortification or ship can resist them.

Fortifications and naval architecture now wear a different complexion to what they did before 1851. The manufacture of the Whitworth rifle and the Armstrong gun are new industries since 1851. The small gun, directed by high intelligence, throwing a large and destructive missile to a distance beyond any previous belief, becomes a more formidable instrument of warfare than the large forces of olden time, directed only by low intelligence and relying upon brute force for success; and in the perfection of these implements of war, costly though they be, we are as a nation deeply interested; for in so far as we are in advance of all the world in their manufacture and in our knowledge of how to use them, so are we safe from foreign interference. The better armed will rarely be attacked, and still more rarely successfully so, by the worse armed.

We hope, then, that while 1862 will show to the world the immense advance we have made in all that contributes to our material prosperity, and in all the arts of peace and civilisation, it will also show that we are as much advanced in our power—and more fully than ever alive to the necessity of being able—to protect them.

The effect of the progress we have made since 1851 is also shown by the rapid increase of our colonial and foreign trades, and the much greater interest which foreigners now take in England and English manufactures.

Then, after a period of great agricultural and commercial distress, we exported but £65,000,000 per annum, now we export £136,000,000.

Then India, governed by a separate authority, did not afford facilities for emigration, or to settlements being made by English capitalists.

Now that vast dependency, entirely under the government of our Queen, intersected by railways and new roads, and with steamboats traversing her rivers, will become, year by year, more intimately acquainted with, and larger consumers of, our manufactures.

Then Canada had recently emerged from a period of discontent and difficulty; now, it is one of the most—if not the most—flourishing and rapidly increasing in wealth and population of our colonies, with a system of railways and water communication unsurpassed anywhere; the bridge over the St. Lawrence being one of the greatest triumphs of engineering in the world.

Our Australian Colonies have not been left

behind. The discovery of gold, although for a time it threatened seriously to affect the cultivation of the country, has so stimulated the tide of emigration thereto, that the supply of wool, almost as valuable to us as gold, has been maintained, and industry of all kinds has advanced most rapidly.

And if we look to foreign countries, we find France just entering upon a career of free-trade, from which it is all but impossible she can recede, while her people, as a whole, appear more friendly to us than at any former period. Our nearest neighbour and principal foreign competitor in 1851, then prohibited or levied such high duties upon the importation of English manufactures, as all but to exclude them from the country. Now, we have passports abolished, free intercourse encouraged, a low uniform rate of postage established, and a treaty of commerce under which our manufactures are admitted, which must tend, year by year, to increase the commercial transactions between us. In 1850 the value of the manufactures of the United Kingdom exported to France was only two millions (2,028,463); now they amount to between six and seven millions.

Holland, also following our example, has recently opened several of the ports of her East Indian possessions to foreign trade with all countries.

Russia, under the guidance of a wise and great sovereign, besides constructing railways and telegraphs, and promoting intercourse between the most distant parts of her vast territories, is emancipating her serfs from bondage, and making a large population at once free and industrious, and therefore larger consumers of the products of the forge and the loom.

China is still further opened to our industry, and bids fair to be one of our largest and best customers; and it is hardly too much to say that the effect produced in the late war on the minds of the rulers of that nation, by the wonderful power we exhibited with our rifles and Armstrong guns, had much to do with its early and successful termination; and if so, the entire expense we have incurred in their manufacture will be amply repaid by the great results achieved through their instrumentality in this one short campaign.

In Japan, Siam, Madagascar, the Phillippine Islands, hitherto almost unknown countries, we find vast populations seeking for our manufactures. I might enlarge at any length on such topics, but enough has been said to show that if the Exhibition of 1851 was, in the words of our Royal President, "to form a new starting point from which all nations were to direct their further exertions," that of 1862 must still more efficiently perform that function, inasmuch as the basis upon which it rests is broader, the nations

interested in the progress of civilisation and commercial freedom more numerous, and the population to be stimulated to exertion enormously larger.

All believe that 1851 did its duty. Can anyone doubt that, as the duty and the sphere of action of 1862 are more extended, so the results it will accomplish will be of greater value to mankind at large?

And here we may pause a moment to pay a tribute of respect and admiration to the memories of those great men who very much contributed, by their influence and personal exertions, to the success of 1851, but who have passed from us during the last ten years.

Among our statesmen and heroes, who attended the opening of the Exhibition, we have to lament the loss of Wellington, Anglesea, and Raglan, three great men, to whom England owes much of her glory and safety. We have also lost other great men, the greatest of England's engineers, Brunel, Stephenson, and Locke, all of whom took an active interest in the Exhibition, and whose advice and aid were freely given when required on any matter relating to the construction of the Crystal Palace.

Next let us refer to some of the leading features of the Exhibition of 1851, and first to the building, which was perhaps the greatest wonder and novelty of its time.

The Commissioners for 1851 advertised for plans, and 245 designs were submitted to public examination, but no single plan was so accordant with the peculiar object in view as to warrant its adoption.

The Commissioners then prepared a plan, but this gave way to the design of a gentleman, neither architect nor engineer, which at once commanded almost universal approbation.

I need not stop to describe the building of 1851. It had its merits and demerits. There was no pretension to architectural effect, but there was vastness and simplicity of design, with remarkable fitness to the purpose required; and the novel and beautiful effect produced by the enclosure of the large elm trees within it cannot be forgotten by any one who saw it. Moreover, all this was attained at a smallness of cost which was again one of the marvels of the structure; but it is hardly too much to say that, had not Sir Joseph Paxton's plans met with the approval of such men as Stephenson, Brunel, and Cubitt, the public would not have allowed so apparently frail a structure, designed by a non-professional man, to have been erected for such a purpose. Its success was, however, perfect; and the question now is, what have the Commissioners of 1862 done to secure the erection of a building worthy of the occasion, and which will not disappoint those who saw and admired the building in 1851.

Having before them the failure of the public competition in 1851, the Commissioners have, it appears to me, wisely determined to take the full responsibility of selecting a design; and although contemporary criticism may expose architectural inconsistencies and faults in the plan adopted, as a whole, I believe it will be approved, and the internal effect of the two domes rising one at each extremity of the great aisle will be grand and imposing, and well calculated to exhibit to advantage the works of art and the manufactures which will be collected within the building.

Then, again, as paintings are to form an important part in this Exhibition, it became absolutely necessary that the gallery to contain them should be a substantial erection, and not subject to accident or to the sudden variations of temperature unavoidable in an iron and glass building.

Considering then that the effect within, and the safety of everything entrusted to the Commissioners, are of infinitely greater importance than the exterior of a structure which, very possibly, may be only required for a few months, the Commissioners have, I think judiciously, resolved, at the expense, perhaps, of external appearance, to produce an interior which, while entirely different from that of 1851, and from that erected in Paris in 1855, shall possess originality and beauty sufficient to make it an attraction, if not superior, at least equal to that of either of them.

From the building let us pass to its probable contents.

That they will surpass in interest, beauty, and value, those of 1851, I have little doubt, though there can hardly be the same novelty; but assuming, as we may fairly do, that both English and Foreign industry will be as fully and as attractively represented as they were in 1851, and that in addition to anything then exhibited we shall have the largest and finest collection of modern paintings ever brought together in one building in this country, there can be no doubt that the Exhibition of 1862 will cause as much sensation in the public mind as that of 1851.

We have now no fears, either political or industrial, to allay—no ignorant prejudices, national or social, to overcome—no vague auguries of indefinable mischief to counteract—but we have to aid in the collection of visitors a strong conviction that great advantages were derived from the knowledge obtained at the Exhibitions of 1851 and 1855, by those who thoroughly studied them, and we have also greatly increased facilities for their conveyance from all parts of London and the country, and indeed from all parts of the world, to the spot selected for the site of the Exhibition.

The increase of the population, the increase of our metropolitan railways, the reduced rates of conveyance, the recollection of the past in the

minds of those who saw it, and the desire to see an International Exhibition by those who were unable or too young to see the last, will together ensure an amount of success to satisfy the expectations of the most sanguine.

And here I will mention a few facts which justify us in expecting a large increase in the number of foreign visitors. The number who visited England in excess of the previous year, between May 1 and September 30, 1851, was only 42,913, whilst the number of foreigners who visited the French Exhibition in 1855 was above 160,000, of whom 40,000 were English. We may, then, fairly anticipate that there will be a great increase in the number of foreigners coming to England in 1862 over those who came in 1851, as all admitted that the English contributions to the Paris Exhibition occupied a great deal of their attention, and excited the liveliest interest among them. Moreover, the important changes which have taken place in the commercial relations of France and England must tend to increase the curiosity of manufacturers to see the latest and choicest specimens of British industry, and surely we may attribute an important place in promoting that improvement in the French tariff, which now admits many English manufactures to France, to the exhibition side by side of English and French manufactures in London and Paris in 1851 and 1855, and to accomplish which the Governments of both countries, appreciating the importance of the occasion, temporarily suspended their customs regulations.

On the whole, then, looking to the success of the Foreign department in 1851, to the preparations now being made in France and other countries, for 1862, proving they are not afraid of placing, for the third time in eleven years, their choicest productions in friendly rivalry with ours, and also to the industrial progress which has been made under more liberal tariffs than then existed, we have sufficient reasons to justify the confident expectation that the foreign department will be as well supported and as successful in 1862 as in 1851.

There are, however, some important points of management and arrangement upon the decision of which much may depend, and which appear to me to require the most open and full consideration and discussion by the public. I mean,

1. The system of prizes adopted in 1851 and 1855;

2. The arrangement of manufactures and works of industry—whether it shall be geographical or in classes; and,

3. The rates of admission.

First, as to prizes. Can they be adjudicated with such perfect fairness and justice as to ensure their being allotted to the proper persons? If they can, then the object of awarding them is attained, but if not, they are the means of in-

flicting great injustice on every other exhibitor, and on the community at large, who are misled by a wrong adjudication.

The question then arises—Can juries, selected as juries must be, possess collectively sufficient general, practical, scientific, and manipulatory knowledge to decide unerringly upon the relative merits of competing manufactures, machines, chemical products, and works of industry of all kinds and of all values, often produced from similar materials, but which, being made for different climates and purposes, may be very dissimilar in character and appearance, though belonging to the same class.

Is it probable that a dozen men can be so fully acquainted with every variety in the class upon which they have to adjudicate as to ensure entire correctness and justice in their decision? I believe this to be simply impossible, and although I have not the slightest wish to impute improper motives to anyone, or for a moment to suggest that any person acted otherwise than to the best of his ability, I believe it is an admitted fact that both in Paris and London the distribution of prizes gave dissatisfaction, and that they were in many cases incorrectly awarded. That juries should be appointed to examine each class of subjects, and to report upon the progress made since 1851 is most desirable, and such reports would be of great value to every exhibitor and to the country at large but it appears to me, upon a careful consideration of all the difficulties, highly undesirable that prizes should be awarded. A prize, given with the utmost fairness, can be but useful to one individual, and the advantage gained by a prize would, in most cases, be far beyond the actual superiority of the article rewarded over the next in merit; but if awarded incorrectly, still more if awarded without a due appreciation of all the various considerations which constitute superior excellence, a great injustice is inflicted on many.

To avoid the injury caused by the slightest error in the judgment of a jury is of infinitely greater importance than any benefit which can arise from giving a reward; and it appears to me that the system of rewards is calculated to divert the attention of exhibitors from the object they ought to have in view, and instead of looking solely, as they should, for the sympathy and support of the public, they will try to obtain the approbation and verdict of the jurors.

Then, as regards the classification of products or manufactures, two plans are suggested—one, that of 1851, the geographical arrangement, under which the Art and Industry of each country is exhibited in one compartment; and the other, an arrangement in classes, so that all similar products or manufactures, come from where they may, will be exhibited together. Theoretically, this appears to be the best plan

for enabling the ordinary run of visitors to obtain most readily a knowledge of the progress of each country; but would it not tend very much to lessen the interest and pride of the smaller foreign exhibitors in the Exhibition, who would naturally prefer seeing the works of each country separately?

And, moreover, the theoretical advantage contemplated by the classified arrangement is one more in name than in reality; for those conversant with cotton, or silk, or woollen fabrics, will have no difficulty in properly appreciating the comparative merits of those belonging to each country, although they are not placed in absolute juxtaposition. So with hardware, porcelain, machinery, &c., and if, in addition to such personal inspection, we have the reports of Juries composed of competent persons, on each branch of industry, the object of a classified arrangement will be attained without any offence being given to any person or nation. It will be much easier to satisfy a foreigner in the arrangement of his goods in the space allotted to his country, than if distributed one in one part of the building and one in another, mixed with those of other nations.

I now come to the rate of admission.

In referring to the lowest rate, which, in 1851, was 1s., we find that this produced more than 6-10ths (.622) of the receipts at the doors, and represented 4,439,419 persons out of 6,039,195 visitors, or about three times as many persons as paid the higher rates of admission.

In Paris the 1 fr. rate also produced more than 6-10ths of the total sum received at the doors (.654); but there was also a lower rate of 4 sous, so that, at 1 fr. and at 4 sous, 4,280,040 persons were admitted out of the 4,533,464 who visited the Exhibition.

These figures are more significant if we compare the populations of Paris and London.

At Paris, with a population of 1,174,346, there were 2,351,031 visitors paying 1 fr. and upwards, or 2.01 visits to each of the population.

In London, with a population of 2,362,236 there were 6,039,195 visitors, paying 1s. and upwards, or 2.5 visits to each person, a curious coincidence of visits to the population. But, in addition to the 2.01 visits of the Paris population, paying 1 fr. and upwards, 2,182,433 of the working classes were admitted at a charge of but 4 sous each.

We are, then, fairly entitled to say that the 1s. rate nearly excluded the working classes (except where the liberality and good feeling of employers found the means), who made 2,182,433 visits to the Paris Exhibition, and which class, had the same facilities been afforded to them here, we may fairly assume, would have made above 4,000,000 visits to the London Exhibition, and contributed in like proportion to its success.

For, as the number of visits by the people, in proportion to the population, paying 1 franc and upwards, so nearly coincided in both countries, it is not unreasonable to suppose that, had our working classes been admitted at a proportionate rate, they would have been quite as anxious to see the Exhibition as the working men of Paris.

I am well aware there is a strong objection in the minds of many to a lower rate of admission than 1s. I do not, however, share in the objection, nor do I believe it is founded on sound principles, and certainly not on the great principle of universality upon which an International Exhibition rests.

The object of such Exhibitions is not only to amuse the rich, but to teach the people. The object is not only to give information to the merchant and manufacturer, to enable him to extend his works and increase his gains, but to show the people the progress of their rivals in trade and manufactures, that they may learn thereby in what manner best to exert their skill and intelligence.

The object is to educate nations, not classes. It is to show to all the part taken by each in the great work of the world's industry; it is to show that the production of very few commodities is confined to one country, or to one set of workmen. It is to show that that country which exercises the highest intelligence and the greatest industry in the conversion of the raw materials which nature so lavishly provides for the use of all, will be most successful in the industrial race which civilised nations are so honorably running one against the other. In what respect, then, do our industrious classes require education more than in a knowledge of the mechanical and artistic works of other countries, and the rate or cost at which they can be produced? And how can lessons on this subject be given with such effect, or be taught by a schoolmaster so well calculated to impress the mind and memory, and be so free from all suspicions of interested motives, as by the personal inspection of the articles collected together at an International Exhibition?

They will there see the works of foreigners—will be able to examine them at their leisure, and to satisfy themselves in what respect they are inferior to, and in what they excel, their own.

They cannot then refuse to believe that they have powerful, intelligent, and ingenious competitors; or that if, by unwise combinations to constrain the free operations of men, masters, or capital, they increase the cost of manufactures or the difficulty of executing public works, other hands, able and willing to work, can be found, and at a rate of wages which would make them, if once brought here, very formidable rivals.

I may be allowed, perhaps, to digress for a moment to state one effect of the late strike among the painters. A machine has just been perfected for executing certain kinds of painting at a wonderfully low rate, and with great speed,—a public advantage, no doubt, but injurious for the moment to the body whose ill-advised movement called it into existence.

It is then, I think, a first duty of the Royal Commissioners to make such arrangements as will open the Exhibition to the largest number of the working classes, their wives and children; the only limit being that required for the preservation of the property and the maintenance of perfect order; and as both of these were accomplished in Paris, there ought to be no difficulty in London. Fortunately we know by their free admission to our National Gallery, to Kew Gardens, and to the British Museum, &c., that the industrious classes may be safely admitted to see and to examine valuable works of art and industry, without the slightest fear of injury arising therefrom, and we now so frequently see 20,000 or 30,000 visitors together at places of amusement that no difficulty can arise as to the preservation of order.

Many, I know, say 1s. is low enough, but is not this a vague assertion, repeated without due consideration, by those who forget or do not know, that 1s. multiplied by the ordinary number of a working man's family—and working men rarely go to places of amusement without them, and it is most desirable this feeling should be encouraged—becomes a sum, which is prohibitory to all but a few of the most enterprising and best paid artisans, and certainly cannot be considered as encouraging the attendance of the working classes as a body, whose instruction in the power and capabilities of foreign workmen is, speaking nationally, of greater moment than the amusement or instruction of the classes immediately above them.

There is, however, a practical objection advanced by some, whose desire to extend to the utmost the benefits to be derived from the Exhibition cannot be doubted, and that is the impossibility of accommodating the number who would apply for admission at a lower rate than one shilling.

To such I reply, first let one day a week be appropriated to working men—Monday, for instance. If this be not enough, give them two, or even three days weekly. Their numbers are so great that they have a right to a fair proportion of the time for which the Exhibition is to be open. The difficulty of regulating their admission should not be allowed to exclude them all from the opportunity of obtaining information most valuable to them as a class, and as individual members of that class.

I must next notice the objections which have been urged against holding an Exhibition in 1862.

They are two. One, including all sorts of minor objections, prejudices, and interests, is expressed simply by saying it is too soon—the public take no interest in it—manufacturers did not gain enough by the last to repeat their contributions.

The second is, that in the present political state of the world, Europe, Asia, and America, it is unwise to incur the risk of failure in so important a national undertaking.

To the first I reply, it is not too soon in the estimation of those who are to fill the building; if, on the one hand, they become guarantors for the expenditure, and, on the other, apply for spaces for exhibition far beyond anything known in 1851, threatening to render the contemplated structure, large as it is, insufficient to meet the demands of intended Exhibitors—nor when our colonies and foreigners are as ready as before to contribute their share to another great collection of the world's industry.

If these be facts, as they are, the objection that 1862 is too soon after 1851 and 1855, to hold another Exhibition, fails entirely.

But there is another reason in which the public are interested why Exhibitions, if once held, should be repeated periodically, and not at too distant periods.

Prizes if given, or the honourable mention by juries, or the unanimous praise in the daily press, of any particular production or manufacture, gives a virtual monopoly of its supply to the producer, to the injury of consumers, until, at a succeeding Exhibition, the merit of other similar productions, is pronounced by competent authority to be equal, or superior to it, or until new articles, which but for the opportunity thus afforded could not have been brought fairly before the world, are compared with it.

The second objection cannot be answered by an appeal to facts, but may be disposed of as effectually by an appeal to reason and policy.

That, in the words of a weekly periodical, distinguished for the ability, though not always for the liberality of its writing, we should choose the time for an Exhibition:—

“When Italy is in the agonies of self-reconstruction; Austria in the throes of a life and death struggle for existence; France sore all over with jealousy and suspicion of her insular neighbour; Prussia in the thick of a quarrel with Denmark; Russia working out the vastest social problem that ever monarch undertook to solve; Turkey gripped to death by her protectors; India racked by famine, and passing through a financial crisis; and the United States split into fragments,” no one will contend. Nor, on the other hand, do I think, that when this country has once determined to hold an International Exhibition, any properly constituted English mind would approve of its being deferred because such events had arisen in foreign

countries during the progress of our arrangements. Indeed, the French Exhibition of 1855 was held during the Crimean war.

Should we be too easily influenced by the political events passing in other countries it would be difficult to find a time to hold an Exhibition, so that such an argument would be equivalent to saying that an International Exhibition should never take place. This reasoning is inconsistent with the object of such demonstrations, for if their highest and most interesting purpose be to cultivate the relations of peace, amity, and commerce between nations for the benefit of all, it is just at the time when Governments appear to be forgetting their duties to their people, or when nations are forgetting their duties one towards the other, or when people of the same nation, stirred up by the demagogue or bigot, enter on the strife of war, that England, confident in her own power, confident in the principles which guide her rulers and govern the actions of her people should show, that in the midst of wars and rumours of wars, she can uninterruptedly pursue her peaceful and industrial career, and be ready to exchange everything she produces with every other country, and to expose, for the inspection of all, the latest results of her national industry.

I think, then, the political aspect of the present time ought not to check the progress of the Exhibition, and I think the strong assurances of support which we have received from our colonies and from foreign countries—the great extension of our commerce and trade—the improved social and intellectual condition of the people—the position we maintain in the production of works of fine art—our chemical and scientific discoveries, and our improved and new machinery applied to all branches of industry since 1851—setting up in high relief as they do, the advantages derived from the peace and freedom we enjoy, ought to stimulate our exertions to make this Exhibition worthy of the great nation which undertakes it—of the great country in which it will be held—and of the great, wise, and good Sovereign under whom we have the happiness to live.

DISCUSSION.

Earl GRANVILLE, K.G., rose and said—I have been informed by the Chairman of the Council that it is the desire of the Council that I should make a few observations following the paper which we have just heard. I remember hearing a story of a distinguished and witty diplomatist, who, being desirous to renew protocols which had been suspended for twelve months, observed to his colleagues, "Here we are, become younger again by one year;" and now, finding myself in the presence of His Royal Highness, presiding over that Society which had such an important in-

fluence on the success of the International Exhibition of 1851, I should be entitled, if certain warnings did not tell me to the contrary, to claim for myself to have become younger by ten years. You will allow that I rightly appreciate what is expected from me when I say that we, the Commissioners for the Exhibition of 1862, came here to learn and not to teach; and that knowing the limit of time which you rightly impose to the duration of your meetings, knowing also that others are going to take part in the proceedings, and that there is a hope that His Royal Highness himself may be induced to make a few remarks this evening, you will feel I am doing that which is right and most respectful to him and to yourselves, if I limit my observations, on the admirable paper of Mr. Hawes, to the smallest possible space. Speaking for myself, and I am sure I speak also for my colleagues—for as you may suppose, we are pretty well-informed as to one another's views upon the leading features of the Exhibition which is to take place next year—I have no doubt it has been to them, as it has been to me, a source of singular gratification to hear, in this most interesting paper, most exhaustive both as to the principles and the details of everything connected with the Exhibition, that with the exception, I believe, of only one point, all that Mr. Hawes has recommended entirely agrees with our views, and with the decisions which we have already put forth. I perhaps may say with regard to this one point—that of Prizes—that the decision we have announced was put forth, not only after very considerable deliberation, but also after considerable hesitation. It is one on which we have not so entirely made up our minds, even at the present moment, but that we are most grateful for the opinions and advice of those best acquainted with the subject, and we must not omit from our consideration the wishes of foreign exhibitors in regard to this matter. There is one point which especially struck me in the paper, because it brought to my recollection much that had passed last year. It is that part in which Mr. Hawes so graphically and vividly described the great,—the almost overwhelming opposition that was raised to the Exhibition of 1851, before its great success became manifest and acknowledged. This has been so little the case on the present occasion, that, remembering as we do the great contest that took place at that time, I almost felt some little fear that we have not had opposition enough to keep us entirely up to the mark. What opposition there has been, I may say, has been generally of a friendly character, and has been confined to the architectural portion of our proceedings. I am glad to hear a favourable opinion stated by Mr. Hawes, and favourably received by this meeting, with regard to our intentions in that respect; and I may say that those who were present at another cere-

mony this morning, and saw the buildings connected with those beautiful Horticultural Gardens—the conservatory and lower arcades—will agree that we have cause to entertain full confidence in our architect, and that we shall achieve something like success in the building we purpose to erect, notwithstanding the moderate sum we feel justified in expending and the large surface of ground which we propose to cover. With regard to our proceedings up to the present time, I do not like prematurely to boast, because some unexpected difficulty may arise to-morrow, but at the present moment I am not acquainted with any obstacle, or, to use a vulgar expression, with any hitch that is likely to interfere with our success. The feeling which has been displayed in the great centres of trade is highly satisfactory, and the support which we feel we derive from an attendance like the present, representing the progress and the intelligence of the metropolis, is also a source of the greatest satisfaction to us. With regard to our colonies, nearly all have come forward in the manner we could desire. I have had information from Lord Canning that the people of India are most anxious to promote this undertaking; and although there are, at the present moment, some difficulties connected with India—difficulties which are met with sometimes in public as well as in private life, owing to which there may not be so large a fund at the disposal of the Indian authorities for the purpose of assisting us, still we have reason to believe that now, when India for the first time has been confided to the Crown, instead of being governed by a Company, the Exhibition will be such as satisfactorily to show the productions of that great and interesting empire. With regard to other countries of the world, we have received assurances of the most satisfactory character. I passed a few days in Paris last week, and there I found that a Commission, composed of the most distinguished persons, had been nominated, with Prince Napoleon as its President, for the purpose of carrying out the wishes of the Emperor, whose desire is that no expense may be spared in the preparations for the French portion of the Exhibition, which promises great success. I had an interview with the Commissioners, and I found that there was a most cordial desire to co-operate with us, and to take care that France shall distinguish herself in this friendly encounter. Indeed, so far from feeling any doubt of the French taking an active part in this great enterprise (notwithstanding that some little feeling of a protectionist character may operate, but which, I am told, will not tell upon individual exhibitors), the danger is not that the French nation will be unworthily represented, but rather that such exertions will be made that, if we do not put our right leg forward, we may

not be able to maintain the creditable position which we held during the last Exhibition. I am sure, however, that where there is the will there is the way, and I have no doubt as to the Exhibition being a great success. There is one point however connected with the meeting to-night that I may be allowed to advert to, namely, the great gratification, and I may say the gratitude, which the Commissioners for the Exhibition of 1862 feel towards the Society of Arts for the meeting which is held here to-night, for the subject chosen for the meeting, and for the presence of His Royal Highness presiding on this occasion. There is much that I could say, if His Royal Highness were not present, with regard to his connection with the Exhibition of 1851; but all who were connected with the working of that Exhibition, will, I am sure, feel that it is not the phrase of compliment, but the strict and naked truth, when I say that but for the personal qualities, the moral courage, the industry, and, above all, the knowledge which His Royal Highness possessed on this subject, combined with the position he held, that Exhibition not only could not have attained the great success it did, but must have proved an utter and lamentable failure. The first question put to me on the Continent was, "Do the Queen and His Royal Highness the Prince Consort take a real interest in the success of this Exhibition?" I stated that, although it seemed unreasonable to expect that His Royal Highness should evince the same absorbing interest in the Exhibition of 1862 that he did in that of 1851, I was sure he took a deep interest in the success of the present undertaking. Indeed, if the feeling had once got abroad that Her Majesty and His Royal Highness did not entertain the same cordial good wishes for the success of this Exhibition that they did for the former one, it would have damped the feelings of all—whether those connected with the administration or those who were called upon to exhibit. I think the answer given this evening, by the presence of His Royal Highness at this meeting, is so conclusive, that I trust it is not unbecoming in me to express, on behalf of myself and colleagues, our grateful sense of the advantage to us which this meeting will be. I have to apologise to you for occupying so much of your time with my remarks, and to thank you for the kind attention with which you have listened to me.

Mr. JOHN DILLON said,—It is no uncommon thing in discussions in this room to explain that the particular matter under consideration is of great importance to some one class or some one department of men in this or some other country. There is however this special exception and peculiarity in the present case—that it would be difficult to say what individuals, or what class, or what community of men are not interested in

the subject now under discussion. The Exhibitions of 1851 and 1862 have necessarily been compared with each other in the addresses which have already been given, and it is impossible to think of the one without recalling and comparing it with the other; but there is one peculiar difference by which the Exhibition of 1862 may be distinguished from that of 1851. The Exhibition of 1851 was, as we know, the first—and it may be supposed we have to say that of 1862 is the second; but there is an essential difference between the two. The first was an untried experiment—it was a kind of youthful exercise of our manufacturers; but this is a more mature and well-considered attempt to make these Exhibitions periodical, and of comparatively frequent occurrence. The term of ten years has been fixed upon for that repetition, though by accident almost it has become, in the present instance, eleven years. It will be a kind of decennial census—not of our population, but of our powers and of our progress—a census, not of our numbers, but of our wealth, our talent, and our industry. When I recollect the room in which I now stand, and I see it ornamented by the beautiful works of Barry, you will see, for the purpose of celebrating the progress of Arts, Manufactures, and Commerce, he has brought together the great men of all nations of the earth. There we have Pericles, and Sir John Moore, and Benjamin Franklin—men of various ages and various countries, and it would be a subject worthy of the talent of such a painter if he could pourtray the British people and those of distant countries depositing their works of art and industry for purposes of emulation and improvement in the forthcoming great Exhibition, established by the people themselves, and presided over by a British Prince. It is now eleven or twelve years since, at one of the earliest meetings for the purpose of promoting the first Exhibition, at a meeting held in the City of London, I ventured, in reference to the then coming plan, to quote the words of a great poet, which, with more confidence and more appropriateness I may now repeat:—

“Such blessings peace to happy Britain brings;
These are imperial works, and worthy kings.”

It is in such a spirit that we, the working men of England—the traders, merchants, and manufacturers of England—rejoice to see your Royal Highness coming amongst us to promote these plans, and that improvement which this undertaking is calculated to produce. In past history we have shown ourselves powerful in arms. Let us hope in the more peaceful triumphs, every ten years, of labour, skill, and manufactures, that we may induce our neighbours, our rivals, our enemies, to turn their swords into ploughshares, and to learn the arts of war no more. I cannot conclude the few remarks with which I have been

permitted to trouble you without alluding to another subject. It will be most gratifying to the country, at large, most calculated to ensure the success of this undertaking, and most agreeable to other nations, to know that our Queen and her Royal Consort, support, approve, and patronise this effort of our industry.

SIR THOMAS PHILLIPS: I venture, Sir, to follow the observations which have been made by congratulating the members of this Society upon the present position and prospects of the International Exhibition of 1862, and by congratulating you, Sir, as the President, and the members generally, upon the successful result of those preliminary measures by which the present position of the undertaking has been achieved. The difficulties in the way have not been light; the work to be done has been, on some occasions, difficult. The interests to be reconciled were occasionally conflicting, and the feelings which it was necessary to harmonise were sometimes discordant. But in the midst of whatever work was to be done, the Society never faltered in its estimation of the importance of the object, or the national value of the cause which we are now assembled to promote. Nor did it ever falter in the conviction of the practicability of establishing this Exhibition, provided the undertaking were conducted with reasonable prudence, and with that zeal and industry with which Englishmen, when in earnest, are accustomed to conduct their undertakings. Your Royal Highness is well aware that there were three wants to be supplied—first the site, next the funds, and thirdly a body of gentlemen to manage the Exhibition in whom the public would have confidence. With regard to the site, the Commissioners of the Exhibition of 1851 agreed to grant the site gratuitously, for the purposes of the Exhibition of 1862, whereby, as it seemed to us, they tendered a graceful recognition of the claims upon them to give every aid in their power to the establishment of Exhibitions. The public responded nobly to the appeal of the Society, by guaranteeing abundant funds for the undertaking; and it is a matter of gratification in which you, Sir, as our President, must participate, that so large a number of contributors to the guarantee fund are members of the Society. With regard to the management of the Exhibition, we were fortunate enough to name five gentlemen whose nomination, from the first, secured the public approval, and I may say, tended in no slight degree to promote the success of the undertaking. I may add, that we feel deeply indebted to those gentlemen for undertaking a duty which is very arduous. I am not sure it may not prove thankless; at all events it is one that can hardly be rewarded to the extent it deserves. Of their merits the public will judge, no doubt, chiefly by the success or failure of the

Exhibition. I do not say that is a true test, but it is the test to which all great undertakings are subjected. With regard to your Royal Highness, I cannot conclude without addressing a few observations to you, Sir, personally. Undeserved praise would, I am sure, be as distasteful to your Royal Highness as to any other person in this room; but I feel bound, on the part of the Council, whose organ I am, to express, in the presence of this meeting, a grateful sense of the assistance which we have received from you at every stage of this undertaking. Whenever counsel was needed, and whenever the influence of your Royal Highness's position was required, the benefit of that counsel and of that influence was given. I will say no more than to express, on the part of this meeting, the grateful sense we entertain of the confidence which the contributors to the fund have reposed in us, and the readiness with which they undertook to supply the funds, and thereby secure, as I believe, the success of the International Exhibition of 1862.

His Royal Highness the PRESIDENT, said—After having heard the interesting observations which have fallen from the gentlemen who have addressed the meeting this evening, it is not my intention to trouble you with any lengthened remarks of my own. Lord Granville has referred to the fact of my presence here as giving an evidence of my interest in the success of the coming Exhibition of 1862. I should be sorry to leave you to draw, as it were by inference, a conclusion from my presence alone that I take that interest, and I wish you to hear from my own mouth that I do take that interest. As to what Sir Thomas Phillips has said with regard to what I have been able to do to start you on the right road, I have done with great willingness and pleasure; and I can assure you it is a real privation to me to be prevented, by the avocations and duties of my position, from being able to give the same amount of time and labour to this Exhibition that I was privileged to give to the one that preceded it. Gentlemen, you will succeed. You are in earnest; and being in earnest you will succeed. I can congratulate you upon the steps that you have taken. You have got an able body of managers, with all of whom I am well acquainted; and I know from personal acquaintance that they are thoroughly conversant with the work which you have imposed upon them. You have got an able architect, in a young officer of Engineers, who has, as Lord Granville says, to-day shown by the works which have been opened in the Horticultural Gardens, that he is capable of vast designs, of novel contrivances, and possessed of great taste. Gentlemen, Lord Granville and Sir Thomas Phillips have referred to foreign nations. I happen to know that foreign nations do look

with favour upon this Exhibition, and are ready to come and measure their strength with you. I need not repeat the warning and encouragement which Lord Granville has thrown out to the manufacturers and artists of this country, to do their utmost, in order to maintain the position which they so gloriously took on the last occasion. Gentlemen, the duty which I have now to perform is a short and pleasing one. It is that of asking you to return thanks to Mr. Hawes for his able and valuable paper. He has taken a comprehensive view of all the points which it is of importance for us to consider with regard to the great undertaking before us, and has expressed his hopes of the success of the undertaking, based upon what I believe to be a perfectly true picture, and I may be allowed to say a most gratifying picture, of the progress of this nation. I beg to propose the thanks of the meeting to Mr. Hawes for the paper he has read.

The vote of thanks having been passed,

Mr. HAWES said, I beg to thank your Royal Highness and the meeting for the kind manner in which my paper has been received. It was a pleasing duty for me to comply with the request of the Council that I would read a paper on this subject; and it is gratifying to know that the sentiments I have embodied in this paper have been so well received by the distinguished body whom I see around me.

THE BOMBAY MECHANICS' INSTITUTION.

The following has been received from the editor of the *Mechanics' Magazine* :—

We have received, at the hands of a gentleman just returned from India, a very interesting account of the above Institution; and as the original promoters of this magazine were undoubtedly the main originators of the London Mechanics' Institution—the parent of all Mechanics' Institutions—we have pleasure in referring to the first of the class established at Bombay.

In 1847, a few of the foremen connected with the engineering and mechanical branches of the East India Company's works at Bombay, first directed their attention to the formation of a Mechanics' Institution, and having enlisted the sympathy and support of Sir Robert Oliver and Sir George Clarke, their proceedings soon assumed a practical form, and before the end of that year the nucleus of the present flourishing Institution was established. It would be impossible to omit mentioning the names of three gentlemen who especially exerted themselves in the cause at that time, and who may be regarded, therefore, as the founders of the Bombay Mechanics' Institution—Messrs. Hodgart, Johnstone, and Mackenzie. The usual up-hill fight had to be fought, of course, but it was manfully waged and successfully accomplished. The Institution pursued thereafter “the even tenour of its way,” until the year 1855, when it was re modelled, enlarged, and established on a wider basis. It has now its library, well-stocked with scientific works as well as those of general literature; its reading-room, upon the table of which, on the arrival of every mail, are placed all the mechanical serials of the metropolis, and nowhere are they read with more zest; its classes well attended by juvenile members, and supplied with excellent teachers; its lecturers, its *soirées*—and, in short, all the collateral advantages which pertain to a well-regulated English Institution.

As a proof of its liberal and cosmopolitan character, we cannot do better than furnish an extract from the retiring address of its late president—now, we believe, in this country in search of health—J. J. Berkeley, Esq., Chief Engineer of the Great Indian Peninsular Railway. At the annual meeting of members of the Institution, held on the 9th of April last, Mr. Berkeley observed as follows:—“We are essentially a public body, representing in our list of members almost every class of the Bombay community. No conventional distinctions are admitted in our rules. Among the natives *caste* is no bar to their connection with the Institution, nor is it recognised within our walls; while among Europeans, the officer who holds her Majesty's commission receives no warmer welcome on election, nor enjoys any greater privilege in our proceedings, than the youngest tyro in an office or a workshop.”

Surely, no more conclusive evidence of the free, noble, and tolerant spirit which pervades the management of the Bombay Institution is required than this.

New societies are springing up around it, having for their objects the mental recreation and improvement of their members; and of these may be mentioned the United Service Institution, just inaugurated; the Byculla Book Society, established mainly by the exertions of Mr. Woolterton; and the Library Association, flourishing under the auspices of the Rev. Mr. Carlile.

Home Correspondence.

THE FIBRE-YIELDING TREE MALLOW.

SIR,—In a letter on the Tree Mallow (*Lavatera arborea*, Lin), which I addressed to you last June, and which was published in the *Journal of the Society of Arts*,* I mentioned that the inner bark of that plant was evidently well-adapted to the making of cords, ropes, mats, &c.

I now briefly resume the same subject, and in doing so I take the liberty of presenting the Society with a small piece of rope, which is roughly manufactured with that material only, and without any hemp. This specimen will be seen to be of a coarse texture, but very strong, and the ropemaker, who prepared it last December, told me that, as it received a greater degree of strength by being immersed in water, he thought it would prove of great service for ship purposes. But he was of opinion that it was less capable of receiving a bright polish, like hempen cord, and that it was not so well-adapted to the finer sorts of cord, &c.

I must, however, explain that the specimen of rope sent herewith was made with the fibre from a plant of only a single year's growth, and since the plant itself does not attain its full maturity until two years old, I think the fibre would be improved, and probably become less coarse, if it were not used until it had arrived at that age.

The ropemaker further stated that in preparing the fibrous bark, it gave out a vast deal of mucilage, and he concluded that it might be advantageously used in the making of paper. But this, as yet, I have had no opportunity of trying.

I am, &c.,

JOHN HOGG.

Sergeant's-inn, Temple, May 21.

Proceedings of Institutions.

DERBY WORKING MEN'S ASSOCIATION.—The report for the year ending September 30, 1860, its fourth year's existence, says, that the reading-room during the past year has been liberally supplied with newspapers, partly by gifts from various friends and partly by purchase, and the walls are now adorned by the valuable maps, part of

the grant which the Association received from the Trustees of “The Working Men's Memorial of Gratitude to Sir Robert Peel.” A considerable addition has been made to the books by the valuable volumes which formed the main part of the grant of £15 given to the Association from the Peel Memorial. The library now contains about 550 volumes, and has been so largely used by the members that the Committee are most anxious to add to it as soon as their funds will allow them. Lectures have not engaged the attention of the Committee during the past year, partly from the doubtful success which the efforts of other similar Associations in the town have met with, and partly from their wish to leave the office of providing lectures to the other societies, while they exerted themselves to secure the success of the Saturday evening “Literary and Musical Entertainments.” The balance of the first short series of these popular gatherings was £7; on the second season of twenty-four entertainments, in the Temperance Hall, it was £29 15s. 2d. During the summer months social gatherings of the members on a smaller scale were held in the reading room, when the tables were adorned with flowers and furnished with illustrated books, stereoscopes, and other objects of interest, and in the course of the evening music, readings, and recitations were given. There was no charge for admission to these pleasant conversazioni, but the members were freely invited, and had the privilege of introducing their friends. The classes have again proved a failure, chiefly from the fact that the members of the Institution are too hard worked during the day to be attracted by the charms of learning; and perhaps it would be well at once to give up the discouraging effort to maintain classes, and to rest satisfied with the fact that efficient night schools are open to adults in various parts of the town, and that those who are determined to acquire learning will struggle through every disadvantage, while no facilities for study will attract those who have not got that resolute determination. A chess and conversation room was opened early in the winter, and has been much used by the members. The Committee regret that the number of members has been rather below the average of former years. The contributions from ordinary benefit members since the foundation of the Association have been:—First year, £27 18s. 8d.; second year, £31 0s. 2d.; third year, £34 14s. 10d.; fourth year, £28 8s. 0d. Indeed, had it not been for the subscriptions and donations of honorary members, who derive no benefit from the Association, and which have amounted in the four years to more than £200, it would have been impossible to maintain the Institution. But having out-lived these dangers of the past, the present financial position of the Association is encouraging. The penny bank continues to be much appreciated, and is promoting provident habits in a large number of homes. The total amount received in the four years ending February 25, including sale of pass books, was £5,227 3s. 7d.; amount withdrawn in same period £4,463 17s. 4d.; balance in hand £763 5s. 11d.; total number of accounts which have been open since March 2, 1857, 8,370; present number of open accounts 3,763. The following shows the deposit (exclusive of sale books) and withdrawals in the four years of the Bank's existence. The shillings and pence are omitted. Deposits, 1857, £546, withdrawals, £228; 1858, £1,449; withdrawals £800; 1859, £2,040; withdrawals £1,918; 1860, £1,098; withdrawals £1,515. The state of trade fully accounts for the falling off in the last year, and for the excess of withdrawals over deposits.

HASTINGS MECHANICS' INSTITUTION.—At the last quarterly meeting of the above Institution, the president (Mr. C. Womersley) in the chair, a report for the last quarter was read by Mr. Joshua Huggett, the honorary secretary. It appears that during the past quarter 21 have been added to the list of members and 26 have left; the present number of subscribers is 332, including 47 ladies. The lecture season during the past year has been one of the most successful the Institution ever had. Seventeen lectures were delivered, fifteen of them being gratuitous

* See vol. viii., p. 619.

having been delivered by gentlemen of the town and neighbourhood. The attendance was decidedly better than ever before known, and on one or two occasions the lecture-room was not found sufficiently large to hold those who wished to attend. The receipts of the lectures were £21 17s. 6d., and the expenditure £23 6s. 10d., so that the average cost of each lecture was 1s. 8½d. The following is a list of the lectures and the dates when delivered:—Mrs. Balfour, Nov. 12, "Charlotte Brontë;" Mr. Pitter, Nov. 19, "Cowper's Political Works;" J. Saunders, Esq., Nov. 26, "The Inventor's Story;" G. Dawson, Esq., Dec. 5, "On Hamlet;" J. C. Savery, Esq., Dec. 10, "The Battle of Hastings;" Rev. J. H. Blake, Dec. 17, "On Great Men and Little Men;" Mr. Womersley, Jan. 14, 1861, "The Pyramids and their Story;" E. V. Harcourt, Esq., Jan. 21, "A Narrative of Personal Adventure in North Africa;" W. D. Lucas-Shadwell, Esq., Jan. 28, "Lights and Shadows of the Good Old Times;" F. North, Esq., M.P., January 30, "The Plains of Italy;" Rev. J. H. Blake, Feb. 4, "The City Arabs;" S. Sharpe, Esq., Feb. 18, "The Interpretation of Egyptian Hieroglyphics;" Rev. J. A. Hatchard, Feb. 20, "Amusements of the People;" Mr. Butler, Feb. 25, "Pneumatics;" Dr. Hunt, March 4, "The American Indians;" Rev. W. W. Robinson, March 11, "John Howard;" J. C. Savery, Esq., March 18, "Coal Gas." The following classes are in operation;—Short-hand, grammar, French, and writing. They have been as fairly attended as could be expected, considering the somewhat advanced season at which they commenced. The report says "The Society of Arts examinations present so many advantages to the students of Mechanics' Institution classes, that it is a source of regret that Hastings has not yet been represented, whilst other towns of less pretensions have sent candidates who have been successful in carrying off prizes. It is hoped that by resuming class instruction to as full an extent as possible in the ensuing autumn, members will qualify themselves to join in the annual examinations." The ordinary income of the Institution during the past year was £138 2s. 6d., and the ordinary expenditure, £119 15s. 1d. The income from all sources was £184 0s. 5d. During the past quarter 564 books have been in circulation.

MEETINGS FOR THE ENSUING WEEK.

- MON.** ...Brit. Architects, 8.
Geographical, 8½. 1. Major-General Sir Henry Rawlinson, "Notes on the Direct Overland Telegraph to India." 2. Mr. C. R. Markham, "Sources of the River Purus, in South America." 3. "Despatch from Dr. Livingstone, dated 9th February, 1861, containing Dr. Kirk's Report on the Botany, &c., of the Regions of the Zambesi."
- TUES.** ...Syro-Egyptian, 7½. 1. Dr. Golowicz (of Kœlmsberg), "Did the Egyptian Interpreters belong to the Class of Priests or not?" 2. Rev. H. B. Cowper, "On the Literature and Language of the Chaldeans in reference to the Book of Daniel."
- Medical and Chirurg., 8½.
Zoological, 9.
- WED.** ...Literary Fund, 3.
Meteorological, 7. Anniversary.
Microscopical, 8.
R. S. Literature, 8½.
Archæological Assoc., 8½.
- THURS.** ...R. Soc. Club, 6.
Philological, 8.
Royal, 8½.
Antiquaries, 8½.
- FRI.** ...Astronomical, 8.
SAT. ...Asiatic, 3.

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

Par.
Num.

Delivered on 24th May, 1861.

233. East India (Finances, &c.)—Copy of Correspondence.
250. Slave Trade—Return.
271. Army (Roman Catholic Chaplains)—Return.
China—Memorial respecting Canton Claims.
Exhibition of 1851—4th Report of the Commissioners.
Civil Service Commissioners—6th Report.

Delivered on 25th and 27th May, 1861.

261. Shipping—Returns.
264. Law of Evidence (Colonies), East India (Law of Evidence)—Return.
260. East India—Home Accounts.
272. Commissioners of the Peace (Ireland)—Return.
Delivered on 28th May, 1861.
38 (4). Trade and Navigation Accounts—(30 April, 1861).
274. Donegal Evictions, &c.—Return.
275. Army, &c.—Account of Receipt and Expenditure.
148. Bill—Excise and Stamps—(Amended).

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[From Gazette, May 24th, 1861.]

Dated 14th May, 1861.

1229. R. W. Woolcombe, Stoke, Devonshire—Imp. in projectiles and in fire-arms for discharging the same.
1230. J. J. L. Chazaren, Paris—Imp. in apparatuses for containing and drawing off beer and other malt liquor; and in drawing malt liquor from casks.
1231. J. H. Johnson, 47, Lincoln's-inn-fields—Imp. in apparatus for the manufacture of aerated waters, and in vessels or receptacles for containing the same. (A com.)
1232. J. Howard and E. T. Housfield, Bedford—Imp. in apparatus to be employed in steam cultivation.

INVENTIONS WITH COMPLETE SPECIFICATION FILED.

1245. A. T. Watson, Middleton, Richmond, U. S.—Springs for railroad cars and for carriages, and for many other purposes for which springs are used or required.—16th May, 1861.
1256. B. Hudson, 25, Gloucester-crescent, Regent's-park—An improved machine for applying steam in a manner to cause direct rotation. (A com.)—16th May, 1861.
1279. B. F. Stevens, Trafalgar-square—Imp. in tractomotives or engines for running upon earth on common roads. (A com.)—18th May, 1861.

[From Gazette, May 31st, 1861.]

Dated 27th March, 1861.

762. W. Jeffs, Manchester, and J. Pennock, Blackley, near Manchester—Imp. in steering ships or boats, and in apparatus connected therewith.

Dated 26th April, 1861.

1046. J. Lunn, G. Hiley, and J. Lisle, Huddersfield—Imp. in means or apparatus for stretching fabrics during the processes of finishing fabrics.

Dated 27th April, 1861.

1064. T. W. Miller, Portsmouth—Imp. in steam engines and apparatus connected therewith.

Dated 6th May, 1861.

1132. G. Ager, Ayleham, Norfolk—Imp. in means or apparatus for breaking or opening land.
1143. G. Coles, Gresham-street West, J. A. Jaques, J. A. Fanshawe, and T. Galpin, Tottenham, Middlesex—Imp. in ventilating various articles of wearing apparel.

Dated 7th May, 1861.

1150. W. E. Newton, 66, Chancery-lane—Improved apparatus for boiling substances and generating steam. (A com.)

Dated 10th May, 1861.

1183. T. Curtis, Livesey, near Blackburn—Imp. in the manufacture of heads.

Dated 11th May, 1861.

1201. G. F. Jones and J. Jones, York—An improved method of propelling and steering steam vessels, and for a casing about the apparatus, constituting therewith a steam condenser.

Dated 14th May, 1861.

1226. G. S. Goodall, Brighouse, Yorkshire—Imp. in wire card covering for carding tow, flax, or other fibrous substances.
1233. J. Chedgoy, the Grove, Great Guildford-street, Southwark—Imp. in the manufacture of glass rollers, plungers, and pipes, applicable to pumps and other uses.

Dated 15th May, 1861.

1234. A. Whyte and M. Malcolm, Glasgow—Imp. in the manufacture of frills, ruffles, or frilled trimmings.
1235. J. Wooller, Bradford—Imp. in machinery or apparatus for drying textile fabrics and materials, which imps. are also applicable in scouring or dyeing of the said materials.
1236. W. Clark, 53, Chancery-lane—Imp. in gas regulators. (A com.)
1237. E. C. Kemp, Avon-place, Pershore-road, Birmingham, and T. Hall, Basinghall-street, Leeds—Imp. in gas and other lamps.
1238. J. Riley, Hapton, near Accrington, Lancashire—Imp. in certain materials to be used in the process of dyeing and printing.
1239. W. Mitchell, Manchester—Imp. in machinery or apparatus for printing paper-hangings.

1240. H. Doulton, High-street, Lambeth—Imp. in the construction of vats and similar vessels for containing liquids.
 1241. S. C. Lister and J. Warburton, Manningham, near Bradford—Imp. in spinning and treating yarns.
 1243. W. Jackson, Leeds—Imp. in mortising machines.
 1244. J. Hicks, Hatton-garden—An improved construction of self-registering thermometer.

Dated 16th May, 1861.

1247. C. Stevens, 31, Charing-cross—Imp. in mills. (A com.)
 1248. W. R. Bowditch, Saint Andrews, Wakefield—Imp. in safety and other lamps.
 1249. H. Gilbee, 4, South-street, Finsbury—An improved reaping machine, to be called "comb-beater." (A com.)
 1250. A. V. Newton, 66, Chancery-lane—Imp. in knitting machinery. (A com.)
 1251. G. Knight, Nottingham—Imp. in holders and cases for holding bonnet fronts, rouches, frills, and other fancy articles.
 1252. C. Clay, Walton, near Wakefield—Imp. in implements for cultivating land suitable to be worked by steam or other power.
 1253. D. K. Clark, 11, Adam-street, Adelphi—Imp. in furnaces.
 1254. J. L. Bowhay, Modbury, Devonshire—Imp. in reaping and mowing machines.
 1255. B. Hudson, 25, Gloucester-crescent, Regent's-park—Imp. in the construction of power looms. (A com.)

Dated 17th May, 1861.

1257. T. Dunn, Pendleton, Manchester—Imp. in watches and pocket timekeepers.
 1258. T. Dunn, Pendleton, near Manchester—Imp. in machinery and apparatus for altering the position of locomotive engines, carriages, and goods, and preventing injury and accidents on railways.
 1259. S. Tearne, Birmingham—An imp. or imps. in producing designs in enamel on articles of brass, and the alloy called German silver.
 1260. S. Pitts, 14, Catherine-street, Strand—Imp. in billiard and bagatelle tables.
 1261. A. Allan, Perth—Imp. in locomotive steam engines, and in buffer and draw springs for the same, and for other railway rolling stock.
 1262. J. C. M. Bézlat, 114, Rue Mouffetard, Paris—Improved apparatus for raising or tilting caaks and other vessels or articles requiring to be tilted.
 1264. A. Turner, Leicester—Imp. in the manufacture of elastic fabrics.
 1265. W. Patey, jun., Lombard-street, and J. Richardson, Brewer-street, Clerkenwell—Imp. in the manufacture of brushes.
 1266. W. Clark, 53, Chancery-lane—Imp. in the preparation or manufacture of artificial alizarine. (A com.)
 1267. P. Ashcroft, South Eastern Railway, London-bridge Station—Imp. in railway chairs and fastenings.

Dated 18th May, 1861.

1268. W. H. Bennett, 42, Parliament-street, Westminster—Imp. in apparatus for regulating the supply of gas. (A com.)
 1269. A. C. Ponton, 9, Arlington-villas, Clifton, near Bristol—Combining together siliceous powder into solid masses of any form by means of sulphur, and which combination he calls siliceous stoneware.
 1270. G. Neville, Birmingham—Imp. in the construction of the sacking of bedsteads and couches, and other like articles.
 1271. S. L. Schueby, 13, Wellington-street, Strand—Imp. in the bindings or coverings of books and portfolios, which imps. may be applied to dispatch boxes, ladies' work boxes, office boxes, and such like articles.
 1272. W. Greaves, Portmadoc, Carnarvonshire—Imp. in machinery or apparatus for dressing slates.
 1273. D. G. Fitzgerald, Cambridge-street, Middlesex—Imp. in obtaining electric currents for telegraphing purposes.
 1274. D. G. Fitzgerald, Cambridge-street, Middlesex—Imp. in batteries for producing voltaic electricity, together with certain metallic products.
 1275. J. Hughes, Newport, Monmouthshire—Imp. in plates to be used in ships and other structures for receiving armour plates or bars, and in the means of fixing such armour plates.
 1277. R. King and K. Robson, Granville-street, Sheffield—Consuming and destroying smoke as emitted from engine or other chimnies, and from all other flues from which smoke is emitted.
 1278. W. Clark, 53, Chancery-lane—Imp. in electric telegraph apparatus. (A com.)

Dated 20th May, 1861.

1280. W. C. Forster, 37, Gibson-street, Lambeth, Surrey—An improved method of manufacturing bricks and slabs, impervious to damp, for preventing moisture rising in pavements and the walls in houses and other buildings.
 1281. G. Buckley, Salford—Imp. in the construction rollers for doubling frames and other machines.
 1282. J. Sidebottom, Harewood, near Mottam, Cheshire—Imp. in cop tubes and partial tubes, and in apparatus for holding them on to the spindles of mules for spinning and doubling, also imps. in the construction of the skewers for shuttles and winding machines.
 1283. J. Jobin, 2, South Island-place, Clapham-road, Surrey, and J. Weber, St. Martin's le-Grand—Imp. in the manufacture of cigars and cigarettes, and in the apparatus employed in such manufacture.

1284. W. Parkinson, Ripon, Yorkshire—Imp. in washing, wringing, and mangling machines.
 1285. M. Scott, Parliament-street, Westminster—Imp. in ordnance.
 1286. G. E. Donisthorpe, Leeds—Imp. in sizing, drying, and warping yarns for weaving.
 1287. A. J. Robertson, 26, Parliament-street, Westminster—Imp. in the construction of ships and vessels.
 1289. E. Humphrys, Deptford, Kent—Imp. in the construction of iron ships, batteries, and forts.

Dated 21st May, 1861.

1290. H. B. Barlow, Manchester—Certain imp. in looms for weaving. (A com.)
 1291. M. A. F. Mennons, 39, Rue de l'Echiquier, Paris—Imp. in the coupling or connecting joints of pipes for the conveyance of liquid, fluid, or solid bodies. (A com.)
 1292. G. F. Griffin, New Adelphi Chambers, Adelphi—Imp. in the manufacture or construction of railway chairs and their fastenings, the latter being applicable to other purposes.
 1293. W. P. Dreaper, 56, Bold-street, Liverpool—Imp. in pianofortes.
 1294. Y. Parfrey, Pimlico Wheel Works, Middlesex—Imp. in the construction of carriage wheels.
 1295. T. Aveling and H. Rawlinson, Rochester, Kent—Imp. in the construction of locomotive engines.
 1296. W. Tasker, jun., Waterloo Iron Works, near Andover—Imp. in machinery or apparatus for tilling or cultivating land.
 1297. T. Sykes and B. C. Sykes, Cleckheaton, and J. W. Crossley, Yorkshire—Imp. in boilers and furnaces.

Dated 22nd May, 1861.

1298. J. Bleasdale, Accrington, Lancashire—Imp. in the manufacture of fluted rollers for preparing and spinning fibrous materials, and in machinery for the purpose.
 1301. H. B. de Beaumont, Geneva—Imp. in ploughs.
 1302. G. E. Donisthorpe, Leeds—Imp. in apparatus used in getting coal.
 1303. G. B. Naglost, Vienna—Imp. in cannon and projectiles to be used therewith.
 1304. W. E. Newton, 66, Chancery-lane—Imp. in printing machinery. (A com.)

INVENTION WITH COMPLETE SPECIFICATION FILED.

1300. J. R. Chesneau, 39, Rue de l'Echiquier, Paris—Imp. in pen and pencil holders.—22nd May, 1861.

PATENTS SEALED.

[From Gazette, May 31st, 1861.]

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| <i>May 31st.</i> | 2993. T. Mallodew, C. W. Kesselmeier, and J. M. Worrall. |
| 2958. R. E. Keen. | 3301. J. B. Turtle. |
| 2972. B. Greenwood. | 3009. J. Robson, jun. |
| 2980. C. S. Duncan. | 3011. T. Roberts. |
| 2983. C. W. Lancaster. | |
| 2987. G. C. Lingham and J. Nicklin. | |

[From Gazette, June 4th, 1861.]

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| <i>June 4th.</i> | 3027. R. Davison. |
| 2981. G. W. Hart. | 3028. R. H. Hughes. |
| 2982. C. W. Siemens. | 3029. R. Hudson. |
| 2992. M. Deavin. | 3038. J. Townsend & J. Walker. |
| 2998. C. J. Hill. | 3041. H. Tucker. |
| 2999. F. H. Edwards. | 3042. T. Massey. |
| 3003. J. J. Whieble. | 3058. J. G. Reynolds. |
| 3008. G. Davies. | 3069. C. Reeves. |
| 3012. M. Jones. | 3128. T. Sykes and B. C. Sykes. |
| 3014. J. H. Johnson. | 3129. G. Hadfield. |
| 3016. L. Simon. | 316. M. J. Stark. |
| 3021. A. J. Fillette. | 708. J. Franks. |
| 3023. J. A. Barde. | 909. J. Silvester. |
| 3024. W. Clark. | |

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[From Gazette, May 31st, 1861.]

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| <i>May 27th.</i> | 1232. R. W. Chandler and T. Oliver. |
| 1536. P. R. Hodge. | |
| <i>May 28th.</i> | <i>May 29th.</i> |
| 1217. M. Henry. | 1439. P. M. Crane. |
| 1219. J. Young and J. Strang. | |

[From Gazette, June 4th, 1861.]

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| <i>May 30th.</i> | <i>June 1st.</i> |
| 1244. J. Meiklejohn. | 1245. R. Owen. |
| 1246. W. Clayton and J. Goodfellow. | 1247. J. Bethell. |
| 1298. D. Moseley. | 1252. R. Owen. |

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[From Gazette, May 31st, 1861.]

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| <i>May 29th.</i> | |
| 1226. M. Poole. | |
| <i>From Gazette, June 4th, 1861.</i> | |
| <i>June 1st.</i> | |
| 1224. B. O'Neale Stratford. | |